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VARIOUS APPLICATIONS OF THE OPERATION OF IRIDECTOMY.

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THE following cases are selected from among those in which I have performed the operation of iridectomy within the last few weeks, as showing a variety of circumstances in which this operation may be serviceable; sometimes to avert impending blindness, sometimes as an additional security for the success of other remedial measures, sometimes to relieve pain and prevent complete disorganization and deformity in eyes which have already become useless.

Iridectomy, with Extraction of Cataract.—On the 8th of September, 1863, I saw, at Brookline, a young man who had lost the left eye from traumatic injury, and whose right eye had become blind from the gradual increase of congenital opacity of the lens. This eye also exhibited dotted opacity of the lower portion of the cornea and considerable injection of the circum-corneal zone of vessels. These appearances induced me to prefer extraction of the lens rather than an operation for solution, and also led me to perform iridectomy at the same time, as an additional security against the occurrence of internal inflammation. Section of the upper half of the cornea having been made with a cataract knife, a portion of iris was drawn through the wound and excised. The capsule of the lens being next divided, the lens was extracted without difficulty.

The progress of the case was in all respects satisfactory. The corneal section healed rapidly, and the dotted cloudiness at its lower part was favorably influenced by the operation. A month after, he came to me, delighted with the amount of vision he enjoyed, even without cataract glasses. With a glass of four inches focus he saw much better, though not as yet quite as distinctly as after the opacity of the cornea shall have wholly disappeared.

Iridectomy, and Extraction of Secondary Capsular Cataract.—Sept. 9th, 1863, I saw Mr. —, of Iowa, æt. about 23, on whose right

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eye operations for solution of congenital cataract had been performed in New Hampshire, some years since, with the result of complete absorption of the lens, but leaving the pupil still obstructed by the thickened and opaque capsule. A puncture was made in the cornea with a broad needle, and the capsule was extracted from the eye with the small canula forceps. But as, in consequence of firm adhesions having formed between the toughened capsule and the edge of the pupil, the iris was somewhat drawn toward the wound, I deemed it best to excise a small piece of it, towards the inner canthus.

The operation was followed by only very trivial injection of the eye, which passed off in a few days; and resulted in excellent vision, both for small objects and for reading. I have since operated for removal of cataract from his other eye, by solution, with excellent results, no secondary operation being necessary.

Iridectomy subsequent to Extraction of Cataract.—In January last, I extracted cataract from the left eye of Mr. —, æt. 63. The lens was removed without difficulty or accident, the corneal section became in due time firmly united, and he seemed to have successfully recovered from the operation; when, without apparent cause, he began to have deep-seated pain in the eye, renewed injection of the vessels, and an appearance as if the pupil were occupied with purulent matter. Fearing total disorganization of the eye, I administered ether, made a small section at another part of the cornea, and extracted what seemed to be the capsule of the lens, transformed to a thickened stringy mass, like sloughing tissue. The pain was relieved, and the eye once more rapidly improved; but exudative processes had been already set up to such an extent in the iris, that complete anterior synechia was formed, with central opacity of the cornea. There remained, however, good perception of light, and on the 9th of September I performed iridectomy at the lower part of the iris, making an artificial pupil nearly of the same diameter as the natural aperture.

No pain, and only slight injection followed the operation; and notwithstanding the previous symptoms of severe intra-ocular pressure, during the attack I have described, he was able in two weeks to enjoy tolerable vision for large objects.

Iridectomy, after Extraction of Cataract.—The history of this case is not unlike the preceding. In January of this year I operated on a gentleman, 76 years of age, extracting the lens in a manner to promise a very favorable result. On the fifth day, the wound of the cornea was firmly closed, the pupil was clear and vision good. But, two days later, a slight central opacity was observed in the cornea, which increased, began to be accompanied with pain, and inflammation evidently extended to the iris.

On making inquiries, to endeavor to ascertain the cause of this unexpected change, I learned that he had for three months subject-

ed himself to a low diet, in the belief that this reduction of the system was necessary as a preliminary to the operation.

General tonic measures, with local depletion, were at once employed; but some hypopion had already formed, the cornea, without apparently becoming ulcerated, became largely opaque at its centre, and the anterior chamber was nearly obliterated by adhesion of the iris to the inner surface of the cornea.

As the eye had good perception of light, I did iridectomy behind the inner transparent margin of the cornea on the 5th of October. Scarcely the slightest irritation followed, and he soon began to have some vision through the artificial pupil. This has since slowly increased so as to afford useful sight, with a certainty of yet further improvement.

Iridectomy in Glaucoma.—On the 3d of October, 1863, I saw, at Chelsea, a lady of about 65, who had for a week previous suffered intense pain in the left eye, almost precluding sleep, and attended with loss of sight. The pain, as I was informed by her family physician, had been continuous, though most severe on alternate days, and had been only partially relieved by large opiates. On examination, I found much injection of the circum-corneal and other vessels of the globe, abnormal tension, as indicated by increased resistance when the globe was pressed upon, considerable turbidity of the field of the pupil, which was dilated, and its margin pressed forwards, by the crowding of the crystalline lens against the iris. She had no distinct perception of objects with this eye, everything appearing like a white sheet. There could be no question as to the glaucomatous character of the disease.

Ether was given till insensibility was induced. An incision was then made, through the sclerotica, just behind the upper margin of the cornea, so as to enter the anterior chamber at its extreme limit. The iris was then seized with forceps and drawn out, and, after being slightly incised at one end of the wound, it was drawn towards the other extremity of the sclerotical incision, so as to separate it, by tearing, from its ciliary attachments. The segment thus detached was then clipped off, with scissors, close to the external wound; no portion being left to protrude through the incision and thus retard its union.

On recovering from the anaesthesia, she was agreeably surprised to find herself free from the intense pain she had so long endured. This never returned. The subsequent day, the injection of the globe was already less than before the operation, and her vision was so much improved that she could distinguish features. All the morbid phenomena quickly subsided, and on the sixth day she could tell the time by my watch, without the aid of glasses. The loss of substance in the iris having been made at its upper portion, no inconvenience resulted as regards vision; the increased area of the pupil being covered by the upper eyelid.

Iridectomy in Specific Iritis.—Oct. 12th, 1863, I saw, in consultation, a lady who had for months suffered from iritis of specific character; but which she had neglected, after the first severe symptoms had subsided, under the impression that, as she felt no pain, the eyes were doing well.

In the left eye, posterior synechia was complete, and two freshly formed tubercles of lymph indicated that the disease was not disposed to abandon its hold. The iris was bulged forward, like a sail filled by the wind, from the accumulation of aqueous humor in the posterior chamber, and it was evidently necessary to resort to iridectomy to reopen the pupil and avert complete disorganization of the globe.

In this instance, the portion of iris removed was below and towards the nasal side of the closed pupillary aperture; that the artificial pupil might, by its position, allow of vision which would harmonize with that of the other eye. Only so much was removed as would be equivalent, in size, to the natural pupil in a moderate light.

The operation was followed by so great relief from a feeling of tension and uneasiness, that she slept better, on the night following, than for some time previous. Two days after, she could distinguish objects with this eye, which before was quite blind; and vision has gone on steadily improving as the symptoms of inflammation have been removed.

Iridectomy in Glaucoma.—On the 7th of October, 1863, I saw Mrs. —, on whose right eye I performed iridectomy for the relief of glaucoma, with complete success, about a year previous. Vision continued excellent in the right eye; but on the day previous to my seeing her, the left eye was suddenly attacked, and at the time of my visit the symptoms of acute glaucoma were already fully developed. Vision was nearly extinct, the pupil was distended and its field turbid, there was much increase of tension of the globe, and considerable injection.

After consultation with her family physician, it was determined to operate immediately. Ether was given, and iridectomy performed, upwards.

So far from being an annoyance, the operation was a source of immediate relief. The following day, the eye was much less injected, was free from abnormal tension, and vision was returning. From this time more and more sight was regained, and in a short period vision became excellent.

This, and the case of acute glaucoma previously reported in this article, furnish striking examples of the advantages to be derived from prompt recourse to the operation; which seems at once to relieve the ciliary neurosis which probably constitutes the initial symptom of the disease, and which thus arrests the hypersecretion of the vitreous which gives rise to the abnormal and excessive tension.

Iridectomy in Strumous Disease of the Cornea.—On the 23d of October, 1863, I saw Miss —, residing in Western Massachusetts, who had the appearance of robust health, but who bore on her neck extensive scars resulting from glandular suppuration.

For several years she had been subject to disease of the right eye, affecting her only during the warm season, but latterly becoming more and more persistent.

The cornea exhibited large spots of interstitial opacity, there was much injection of the circum-corneal vessels, and the iris was evidently implicated to a certain degree. Much pain, in and around the eye, was complained of, and there was great intolerance of light.

Iridectomy was performed, upwards, and was followed by obvious relief, so that she was able to return home after a few days. Tonics were combined with the local treatment, but the improvement seemed to be immediately accelerated after the operation.

Iridectomy in Glaucoma.—On the 5th of November, 1863, I saw, at Milton, a lady advanced in life, whose right eye had been lost some years previously, from glaucoma.

Six months before my visit, the left eye had begun to fail, and she was at times nearly blind, with occasional paroxysms of severe pain. Vision had become very imperfect, even in the intervals of the paroxysms. The eye-ball was tense and hard, and exhibited a dilated pupil, the field of which was not clear. There was considerable injection of the vessels of the globe, with a dulness and loss of sensibility of the cornea.

Although the symptoms were of considerable duration, there seemed to be every reason for resorting to the operation of iridectomy, which alone offered a chance of relief. Insensibility was therefore induced by means of ether, and upward iridectomy was done.

She was at once relieved from pain by the operation, and all the morbid symptoms vanished with surprising rapidity. The second day after its performance, she was about her house almost as usual, and already found much improvement in her vision. At the end of three weeks she could read an ordinary print, with readiness, with the aid of suitable glasses.

Iridectomy for the Relief of Pain and Tension of the Globe threatening the Loss of the other Eye.—On the 18th November, 1863, I saw Mr. —, blacksmith, of Uxbridge, who lost the right eye several years previously, from the penetration, as he says, of a fragment of iron, which he believes to remain still lodged within the eye.

This eye is frequently red and painful, so that he is obliged to forego his usual labor, and, latterly, he has had occasional attacks of loss of distinct vision, for a short time, in the left eye. Examination with the ophthalmoscope shows floating opacities, of considerable size, in the vitreous, which prevent a distinct view of the fundus of the right eye. There is no appearance of any morbid

growth, or of the formation of a deposit of lymph or pus, or of the presence of a foreign body within the globe. The eye appeared larger than the other, and was abnormally tense.

I advised the patient that it would be better, if necessary, to sacrifice the right eye, which was not only useless but troublesome, rather than to imperil the sound eye by allowing symptoms of sympathetic inflammation to be developed in it; but proposed that iridectomy should be performed, in the hope that this might be sufficient to afford relief from the actual symptoms and to give immunity from sympathetic disease.

Ether was not administered, and after the operation the patient was permitted to return immediately home, a distance of forty miles.

I saw him again eighteen days afterwards, when he expressed himself entirely relieved of all morbid sensations in both eyes. The right eye had greatly improved in appearance, being less tense, and having lost the very considerable injection which existed before the operation.

Iridectomy, with Extraction of Cataract.—Dec. 10th, 1863, I operated for extraction of cataract on both eyes of Mr. —, aged 66.

The lenses, even in their cortical layers, were very hard, and though extracted without difficulty, and under the influence of ether, their removal was followed in each eye by the escape of a small amount of very fluid vitreous humor. There was also a strong tendency to prolapse of the iris through the corneal wound.

To obviate danger of interference with the primary healing of the wound, by the occurrence of prolapsus, I excised, in each eye, a small portion of iris, opposite to the centre of the corneal section.

On the fifth day complete union of the edges of the wounds had taken place in both eyes. The patient complained of no pain, except that occasioned by conjunctival injection, and the pupils were clear.

On the 20th December, his vision was already good for large objects, even without assistance from cataract glasses.

Iridectomy, in Eyes affected with Strumous Iritis.—On the 15th Dec., 1863, I saw a young colored woman from Rhode Island, both of whose pupils had become nearly closed from the effects of an insidious form of iritis, which, without giving her much pain, had caused a deposit of lymph which had not only caused adhesion of nearly the entire margin of the pupil to the capsule of the lens, but had overspread the entire area of the pupillary aperture with a thin layer of lymph, which obstructed vision.

As atropia produced no material effect; and as the obstruction of the pupil had increased since I saw her a short time previously, giving every reason to feel assured that obliteration of the pupils and total loss of vision would soon ensue; I determined to perform iridectomy, so as to form an artificial pupil downwards and inwards

from the position of the natural aperture; placing the two pupils in these situations, as being those best adapted to ensure harmonious vision in the two eyes.

Under the influence of ether, both eyes were operated on, and notwithstanding extensive adhesions, pupils were established of satisfactory size and form.

On the 16th, the eyes showed less injection than I could have supposed possible, and she was scarcely conscious, from any sensations of discomfort, that operations had been performed.

She returned home on the 18th with the eyes in a satisfactory condition as regarded the newly-formed pupils, and giving promise of excellent vision.

PRESERVATION OF CARIOUS TEETH BY FILLING.

BY ENOCH C. ROLFE, M.D.

(Concluded from p. 415.)

So far I have spoken of teeth with dead or exposed nerves only, without stopping to consider the other conditions of the tooth. The nerve may be exposed, however, while the decay is quite limited, and situated in the articulating surface, where it can be readily filled with common dentists' foil. The treatment of such a case is as plainly indicated, as that for abscess or carbuncle, and yet there are dentists and physicians who insist that extraction is the proper remedy for all teeth with dead or exposed nerves.

The second form of diseased teeth, is where, besides having an exposed nerve, there is loss of a part of the cutting surface or crown of the tooth.

Under most circumstances it may be better to remove such teeth; for instance, where we find such teeth, nearly all the other teeth may be diseased, the gums spongy and otherwise diseased, the teeth covered with tartar, and perhaps alveolar abscess is to be added to the rest. Oftentimes a person may have two, three, or four teeth, that are worth saving, but the others are gone, or too much diseased for cure. Under all the above conditions the best treatment is to remove the whole, and give the patient an artificial set. But it is a very common thing to see patients with one, two or more front teeth badly decayed, while most of the other teeth, and perhaps all, are good, and the mouth and gums in a healthy condition. If these two or three diseased ones can be restored to health and shape, the patient may avoid the necessity for wearing artificial teeth for years, perhaps for life.

Where only one or two front teeth are decayed, if the fangs are healthy, they may be cut off and artificial ones pivoted upon the roots; but pivot teeth are filthy nuisances in the mouth under the most favorable circumstances. Any person who has worn one,

would be willing to pay any reasonable sum to have his old tooth back again, if it could be filled and made clean and healthy. One or two teeth may be attached to a plate, made fast to the other teeth by clasps or springs, or the plate may be retained in place by atmospheric pressure. Either of these is far preferable to pivots, but clasps soon destroy the teeth they embrace, and atmospheric pressure is disagreeable, and a constant drag upon the roof of the mouth.

By plugging from one to half a dozen, oftentimes all these artificial appliances may be avoided, and perhaps severe alveolar abscess or neuralgia cured.

So long as the only form of gold prepared for filling teeth was that known as "dentists' foil," it was hardly possible to restore a tooth, that had any considerable portion of its crown, or cutting surface destroyed, to its original shape, although long practice had enabled some operators to perform surprising cures with this material. Mr. Alfred J. Watts, of Utica, N. Y., has patented a method of preparing gold, which renders it so soft that it can be packed layer upon layer, by pressure, until it becomes a solid mass, equal in density to coin. With this gold, a tooth with a portion of its crown broken away, may be built out to its original shape, if a firm foundation can be obtained to commence upon. His method of preparing is simple. He first dissolves pure gold in nitro-muriatic acid. It is then precipitated with proto-sulphate of iron; this precipitate is washed with hydrochloric acid to remove any peroxide of iron or other impurities, that will thus be washed away. This precipitate is then amalgamated with from four to twelve times its weight of mercury. The mercury is then dissolved out with nitric acid, leaving the gold in the form of a brittle non-coherent mass. It is then annealed, or slowly raised to a cherry-red heat, and it is ready for use.

With gold thus prepared, by careful manipulation, an old broken tooth may not only be restored to its original shape, but its weak parts strengthened, and bound together.

CASE I.—The wife of one of the members of this society, while having an operation performed upon another tooth, called my attention to one of the central incisors, saying she supposed nothing could be done for that, but wait for it to break and then have its place supplied by an artificial one. Upon examination, I found that the nerve was dead and had probably been so for a long time; that about one fourth of the cutting surface upon the lateral side was gone—a little less on the labial aspect, a little more on the palatine, and the tooth much discolored. On cutting into the decay I found that the discoloration could readily be removed. The gums were in a healthy condition; most of the other teeth had been plugged, but were in good condition. I ventured to promise that I could plug it, restore its original shape and nearly restore its color,

and make a useful tooth of it, which would probably last as long as her other teeth.

But I also told her that there was a possibility that the tooth would break in the operation, but that if it would break during an operation, it would soon break any way. She said if she could be sure that it would not break she would not value any money, for she had a perfect horror of artificial teeth, but the idea that it might break frightened her. She left, however, saying that she would hear what the Doctor had to say about it and see me again. She came again in two or three days, saying that her husband advised her to put the case into my hands to do with, just as I thought best. I plugged the root to the apex, restored the crown to its original shape, and left it with nearly as good a color as its mate which was sound. I saw her after three quarters of a year's use; she expressed herself more than satisfied with the success of the operation; said the tooth seemed every way as good as the other, and that no money would induce her to have it put in the condition in which I found it.

CASE II.—Another physician's wife came to me with an under bi-cuspid badly decayed, part of the crown gone, nerve exposed but not dead. This was treated like the first, after killing the nerve. She then informed me she had been to another dentist, who had told her that the tooth was too far gone for any operation but extracting, and rather insisted on removing it at once. She was so unwilling to lose the tooth, that she concluded to seek further advice; her husband sent her to me, and the result is that she now says she would be willing to pay fifty dollars to have one like it filled, rather than lose it.

CASE III.—Mrs. S., a lady from Maine, consulted me about her upper front teeth. Except these four, her teeth were very good. These had been decayed for many years, and were very bad. The centrals were decayed through from side to side, the nerves dead, and the nerve cavities so decayed that they were tunnel-shaped; one third of the cutting surface upon each side was gone. The laterals were about as badly decayed upon the central side, but sound upon the cuspid portion; nerve cavities not so badly decayed. With one she had had alveolar abscess frequently; these teeth were all badly discolored. This to appearance was a most unpromising case—at the time, the most unpromising one I had ever seen. The lady was a resolute woman, determined from principle never to wear artificial teeth, but to keep her own as long as possible. She was therefore ready to have anything done that I dared undertake. The resolution of the patient, healthy gums and naturally strong teeth, were in my favor. I commenced by plugging the fangs of the centrals at the first sitting. One inflamed and abscess formed. A less resolute woman would have given up; she poulticed her face, and in four days returned as resolute as ever.

At the next sitting I treated the laterals as I had before done the centrals. At four sittings of about two hours each, I succeeded in safely plugging the six cavities, completely restoring the shape and size of the teeth and very much improving their color. Into these six cavities I had condensed five pennyweights of gold. I had made it a condition before operating that she should stay in town after the operation until I should be satisfied that all would do well. At the end of a week there were no signs of inflammation or soreness, and I allowed her to go home. I saw her nearly a year after the operation, and she told me her teeth had not given her the slightest trouble or uneasiness; that they felt so much like her teeth of former days, that she feared she might use them too carelessly, and some day undertake to crack nuts or some other hard substance, and break them. She, too, said no money could buy the gold from these teeth unless more could be put in.

CASE IV.—The master of one of the South End Schools had a lateral incisor that had been filled more than a quarter of a century. Until within the last year it had not given him the slightest trouble, when, all at once, the filling fell out. To his astonishment, he found that decay had commenced upon the other side of the tooth, extending entirely through it until it had loosened the filling which was upon the central side. When I saw the tooth the cavity extended from side to side, one quarter of the front point next the central was gone, and all the articular surface except the enamel. The tooth looked very much as if a saw had been run across it, which was just thick enough to take all but the front enamel, but as it went up and the tooth became thicker, it left the enamel on the palatine portion. The decay extended upwards to about a level with the alveolus, but the nerve did not seem to be involved, probably the nerve was dead and the cavity filled with ossific matter. The question with the patient was, whether it was best to cut off the tooth and pivot one upon its root, or extract it and set a tooth upon a plate. The latter could be easily done, as he already wore the centrals on plate. I told him there was no need of doing either, that I could make that tooth more serviceable than any artificial tooth could be, but that it would proclaim its golden character. To him this was no objection. I filled it, and he seemed delighted with the result. If it lasts as long as the first he promises to be satisfied, and I think I shall be. He said it was worth fifty dollars to him, and he was willing to pay me that for the operation. I concluded to take a more moderate fee, telling him that at the end of the twenty-five years, if the filling was good, I would take the balance.

Dr. Rolfe also exhibited a patient in whom he had restored to its original form and dimensions about a quarter of the substance of an upper incisor tooth, extending from the gum to the extremity on its outer edge.

ON THE CINCHONA BARKS.

THE species of *Cinchona* are very unequally distributed in the forests on the eastern side of the Andes, from the extreme north of South America, in latitude 11° N., where they occur on the mountains of Santa Martha, to the forests of Bolivia, as far S. as 19° S. Speaking generally, the trees grow at an elevation of from 4000 to 8000 feet above the level of the sea.

The geological formations on which they are found are mica slate, gneiss, clay slates, and lower silurian rocks, covered, however, in most cases, by several inches of rich vegetable soil. The climate of the districts inhabited by the cinchonas is by no means an agreeable one, as witnessed by Dr. Karsten, who describes the rainy season as lasting nine months in the year, during which time "a steady rain is only interrupted during the day by short gleams of sunshine interchanging with clouds and mist, whilst in that part of the year which answers to our winter, cold nights in which the temperature of the air descends to freezing-point, are followed by days in which the rays of the sun, piercing here and there through the thick clouds, raise the temperature to 77° F., whilst the leaves are kept almost constantly bedewed by the continual mists."

The temperature of this vast region, as stated by Mr. Markham, ranges (to speak generally) from 60° to 80° F., thus corresponding pretty closely with the isotherms laid down by Dove for these regions. It is in the highest degree necessary to pay attention to these external conditions, for, to say the least, they are of equal importance with the selection of the proper species for medicinal uses. The medicinal properties of many plants vary extremely in the same species under different conditions, and even when no appreciable difference in those conditions can be traced. Identity in medicinal properties by no means corresponds with identity in structural characteristics in all cases, though it does so in many. *Digitalis* grown in the Himalayas is said to be nearly if not quite inert. On the other hand, hemp grown in this country is almost entirely devoid of the peculiar resinous principles so abundantly found in the same species growing in the hot sunny plains of India. But we need not go far in search of instances of this kind. *Enanthe crocata* and *Cicuta virosa*, tolerably common plants in the south of England, where they have a well-established evil repute as poisonous plants, are both harmless on the other side of the Tweed, according to Dr. Christison. We have also the testimony of Dr. Karsten upon this point, with regard to the variability in medicinal virtues of *Cinchona lancifolia* in New Granada, and that of Mr. Spruce in the case of *C. condaminea*, the qualities of whose bark vary accordingly as the tree has grown on the sides of the mountains most exposed to the rays of the evening or morning sun. Vegetable physiology is not at present competent to account for

such peculiarities in a satisfactory manner, but it is at least necessary to bear them in mind in the experiments now being carried on, as the kind of cinchona-tree that is proved to yield quinine and valuable alkaloids in Peru may by no means necessarily yield the same products when grown in other climes.

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Of the numerous species described by botanists as belonging to this genus, only a few have been proven to possess valuable properties, while others have been shown to be entirely inert. Before giving the list of valuable species, we feel constrained to say a word or two about the nomenclature, already sufficiently involved, and likely from injurious changes to become more so. First, as to the name of the genus *Chincona*, or *Cinchona*. Linnæus, erroneously, no doubt, wrote the latter, which has been up to this time universally adopted by botanists, pharmacists, and medical men. Mr. Markham's suggestion to alter established usage is therefore objectionable: the change, however, is so slight, that we apprehend no practical inconvenience will arise, which ever way the name be spelt. As to the species, the case is different: these have been named and renamed, according to the views of particular authors, till confusion has become worse confounded. Fortunately for our present purpose, only one of the medicinal species to be hereafter mentioned suffers under this horrible malady, caused by conflicting synonyms. Let us explain: in the works of Weddel, Howard, and other recent writers, the species yielding the various kinds of crown bark has been called *Cinchona condaminea*; its varieties have been named—1. *Uritusinga*, from the name of the place where it grows; 2. *Chahuarguera* (!) from two native words signifying a resemblance to garments made of the fibre of the American aloe or agave; 3. *crispa*; and 4. *lancifolia*, besides others that need no mention here.

Now Dr. Hooker points out that the original name applied by Linnæus and adopted by many other writers was *C. officinalis*, a name changed by Humboldt and Bonpland, without sufficient reason, to *C. condaminea*. Dr. Hooker very justly remarks, that "When once the law of priority is departed from without perfectly good cause, the door is opened to endless future change and consequent confusion." Hence then, in future, we are to employ Linnæus's original and unobjectionable name *C. officinalis*. The variety—1. *Uritusinga*, having been the original one detected by La Condamine, is to be called *C. officinalis*, var. *condaminea*; the variety 2. *Chahuarguera*, having been figured by Bonpland, is to be called *C. officinalis*, var. *Bonplandiana*; a change for the better so far as facility of pronunciation is concerned; vars. 3 and 4 remain as they were. We should not have trespassed so long on our readers' attention, had we not thought it more than likely that this recent

change of names, however desirable it may be, may sorely puzzle those not well versed in botanical lore. Adopting, then, the correct nomenclature, we have the following medicinal species:—

Cinchona calisaya furnishes yellow bark.

"	<i>nitida</i>	}
"	<i>micrantha</i>	
"	<i>peruviana</i>	

furnish grey barks.

Cinchona officinalis.

"	<i>var. lancifolia</i>	furnishes Carthagena bark.
"	" <i>condaminea</i>	}
"	" <i>crispa</i>	
"	" <i>bonplandiana</i>	

furnish crown barks.

Cinchona succirubra furnishes red bark.

Geographically speaking, the kinds may be thus grouped:—

1. The Calisaya, or yellow bark region of Bolivia and Southern Peru.
2. The grey bark region of Huanuco and Northern Peru.
3. The Carthagena bark region of New Granada.
4. The red bark region of Ecuador.
5. The crown bark region of Loxa.

Cinchona calisaya, and a small shrubby variety of it, called *C. calisaya*, var. *josephiana*, so named in honor of Joseph de Jussieu, yield the much-valued yellow or Calisaya bark. These trees inhabit the forests of Bolivia and Caravaya in South Peru, and were originally discovered in 1785 by the German botanist Haenke, accompanied by a Spanish naval officer. "Formerly," says Dr. Weddell, "they were everywhere found around the inhabited parts of the region, while at present, to find a tolerably-sized tree, it is necessary to make several days' journey into the heart of the forests." Further north, although the soil and climate continue much the same, the valuable species disappear until in 10° S. latitude, in the forests of Huanuco (the district traversed by Ruiz and Pavon), the species yielding the Huanuco or Lima barks of commerce are met with. The epithet grey is applied to these barks, from the appearance presented by the lichens growing on them; when wetted, they have an opalescent appearance. They are esteemed in commerce as yielding cinchonine.

Again, going northwards, is an interspace inhabited by many *inert* *Cinchona*, and beyond this district are the forests of Loxa, in Ecuador, yielding the various kinds of crown bark, the produce of *C. officinalis* and its varieties. These barks are rich in cinchonidin, and hence the cure of the Countess de Chineon must be attributed to that substance. For upwards of a century these were the only barks known. Carthagena bark is yielded by another variety, *C. officinalis*, var. *lancifolia*, and also furnishes a large amount of quinidin. The tree is a native of the forests of New Granada, where it was originally discovered by Mutis.

On the eastern side of Chimborazo in Ecuador, are situated the forests supplying the red bark, cascarilla roja, the produce of *Cinchona succirubra*, and now considered as valuable, or more so, than the yellow bark. To Pavon, Dr. Klotsch, and especially to Mr. Spruce, a botanical traveller, we are especially indebted for our knowledge of this important species. It is described as being the most handsome tree of the forests in which it is found, and seems to require a higher temperature than that which is congenial to the other kinds.

The method of collecting the red bark, as described by Mr. Cross, seems to be nearly the same as that noticed by Dr. Weddell, in the case of the Bolivian barks. The red bark is exported from Guayaquil, and contains from three to four per cent. of alkaloids. Its introduction into England resulted from the capture of a Spanish ship with a cargo of this bark by an English frigate in 1779, and Dr. Saunders, of Guy's Hospital, was the first to ascertain its value. Unmerited discredit afterwards attached to it, from the use of fictitious kinds in place of the true red bark. North of Chimborazo, in the elevated plains of Riobamba and Quito, the *Cinchoneae* disappear, but in the mountain ranges further to the north, from about lat. 2° N. to the Santa Martha mountains in 11° N. they are again met with.

There are thus many spots in the regions alluded to, as well as in Mexico, &c., where the conditions seem favorable for the growth of cinchonas, but where, nevertheless, they are not to be found, owing, as Mr. Markham suggests, to breaks in the chain of mountains, and the occurrence of low lands in the intervals.

The utter disregard which the Spanish and South American Governments have shown in past years to the maintenance of the cinchona forests, and the reckless destruction of these valuable trees, which they took no steps to prevent, have caused a well-grounded apprehension lest the supply of quinine may shortly fail. Representations to this effect were made by M. D. Jussieu and others more than a century since, but still the same recklessness prevailed, accompanied by carelessness in the due selection of the proper kind of bark, and by obstructive and vexatious fiscal regulations. The recent testimony of Dr. Weddell as to the course pursued in Bolivia, and that in Peru by Mr. Markham, as well as in Ecuador by Mr. Spruce, is all to the same effect. It is a fact by no means devoid of significance in this particular, that in the recent International Exhibition, not one of the South American Governments contributed specimens of the barks grown within their territories—a void in part supplied by Mr. Howard, who exhibited living plants of some of the most valuable kinds, as well as a fine collection of commercial specimens. Our Dutch neighbors also sent illustrations of the success of the experimental culture of cinchona barks, now being carried on by them in Java. No wonder, then, that attempts have been made at various times to transplant the cinchona plants to other regions. The truth of Mr. Spruce's proposition, that

"whatever vegetable substance is needful to man, he must ultimately cultivate the plant producing it," will not be disputed. The earliest attempt to export living cinchona plants was that of La Condamine, who in 1745 tried to convey some young plants down the Amazon to Cayenne, from whence he intended to convey them to Paris—a plan that was frustrated by a wave, which dashing over his vessel, swept off the box containing the plants. * * * *

Mr. Howard forcibly urges upon the profession the desirability of employing the salts of cinchonine as a substitute for quinine, as the same amount of febrifugal power may be obtained from the former as from the latter, and at one-fourth of the cost. It is assuredly of great importance that the accuracy of this statement be tested in practice.—*British and Foreign Medico-Chirurgical Review*.

NOTE ON POISONING BY RHUS TOXICODENDRON.

THERE are but few of our indigenous plants more widely disseminated in the neighborhood of Philadelphia than the species of *Rhus* commonly known as poison vine. The singular fact that many persons are wholly unsusceptible to its influence is quite true, whilst that others are obnoxious to its effects in various degrees, from a temporary irritation to the most virulent inflammation and eruption, is equally true. Being one of the latter class, we have often suffered the inconvenience arising from it, and used most of the remedies recommended in the books, and by non-professional experience. When the alkaline solutions, as ammonia, liquor potassæ or even pearlash are applied, immediately after exposure to the *virus*, they rarely fail to counteract its effects except in the most susceptible, but unfortunately it often happens that the victim does not suspect the nature of the irritation until it proceeds to the vesicular condition, when, as is well known, the little blisters extend slowly to the surrounding parts, appearing as pimples colorless at first, often attended with an annoying itching sensation. In a recent attack, where the extension of the poison over the surface had been controlled by diluted liquor potassæ (1 to 2 of water) it occurred to us to try the coagulating influence of Monsel's Solution (Liq. Ferri Subsulphatis, Pharm. 1860), and with entire success and relief. Each vesicle was punctured with the point of a penknife, and a little splinter of wood dipped first in the solution and then inserted in the vesicle. The sensation is a little smarting, but not severe, and the peculiar action of the poison is at once arrested at the base of each vesicle, which soon dries up and the irritation ceases. The scab which forms under the influence of the subsulphate, is more consistent as well as persistent, than when it is not employed, and it has a dark-red color, which gives to the part a speckled appearance. The relief thus afforded when the poison is on the wrist, or

on the hands where the cuticle is thick and the vesicle deep-seated, is very gratifying.—*Am. Jour. of Pharmacy.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, DECEMBER 31, 1863.

THE SANITARY COMMISSION.—This angel of mercy, which follows in close companionship upon the horror and havoc inseparable from the terrible war which still devastates our land, is just now paramount to the excitement of the war itself in the place which it holds in the public mind. The impediments to the movements of hostile armies which the forces of nature present at this inclement season have caused a temporary suspense of active hostilities, while the whole country, away from the winter camps of our brave soldiers, is busily engaged in the endeavor to provide for their future wants in every way that patriotism and benevolence can suggest. There seems to be no limit to the bounty which the bare mention of this noble organization everywhere unseals as if by a magic touch. East and West, North and South, as far as the control of our arms extends, all hearts and hands unite in urging forward the blessed work which it is its mission to perform. It is binding all classes together as they have never been united before; breaking down all conventional barriers of society, and blessing its coadjutors at home equally with its beneficiaries in the hospital or on the field of battle. Its practical workings have been everywhere marked by rare good sense and efficiency, adapting it to every emergency, and daily enlarging its power and increasing its scope. When its operations first commenced it met a pressing want by the publication of a number of excellent papers on important points of military hygiene, or the management and treatment of those diseases to which our armies were specially exposed. Its strength has grown with its age, until its helping influence is felt by every soldier in the land.

At the present time the Sanitary Commission has two principal organs by which it makes known to the public at large its regular operations: the *Sanitary Reporter*, published semi-monthly at Louisville, Ky., under the editorship of the distinguished geologist, Dr. J. S. Newberry; and the *Sanitary Commission Bulletin*, published also semi-monthly, at New York. In the interesting pages of these two publications we find full reports of the operations of the various agents of the association in all parts of the country; important information of the bureau work at Washington; detailed accounts of the different "Soldiers' Homes" which it has established in various central localities, together with much miscellaneous information upon matters pertaining to the health and comfort of our armies. They also publish explicit information concerning pensions, furloughs, the method of securing back pay, &c.; in short, anything and everything which can in any way lighten the burdens or relieve the sufferings of our patriot soldiers furnishes a topic for their pages. Running over their interesting contents, we often come upon touching pictures of heroic self-devotion, which show how truly noble is the spirit, which deep down

in the hearts of the brave men in the ranks sustains them through all their sufferings and trials. The following extract, which we take from the *Bulletin* of December 15th, shows so well the practical operations of the Commission, and is so full of pathos, that we cannot refrain from copying it entire. The writer is speaking of one of the Nashville Hospitals.

"Away up in the fourth story of Hospital No. 3, and in a far corner of the ward, he noticed one day an old lady sitting by the side of a mere lad, who was reduced to the verge of death by chronic diarrhoea. She was a plain, honest-hearted farmer's wife, her face all aglow with motherly love, and who, to judge from appearances, had likely never before travelled beyond the limits of her neighborhood, but now had come many a long mile to do what might be done for her boy. In the course of a conversation she informed Mr. Ingraham that if she 'only could get something that tasted like home—some good tea, for instance, which she could make herself, and which would be better than that of the hospital, she thought it might save her son's life.' Of course it was sent to her, and on a subsequent visit she expressed her hearty thanks, in a simple, hearty way, quite in keeping with her whole appearance. Still she seemed sad; something was on her mind that evidently troubled her, and, like Banquo's ghost, 'would not down.' At length it came out, in a confiding, innocent way—more, evidently, because it was uppermost in her thoughts than for the purpose of receiving sympathy—that her means were about exhausted. 'I didn't think it would take so much money; it is so much further away from home than I had thought, and board here is so very high, that I have hardly enough left to take me back; and by another week I will have to leave him. I have been around to the stores to buy some little things that he would eat—for he can't eat this strong food—but the prices are so high that I can't buy them, and I am afraid that if I go away, and if he doesn't get something different to eat, that, maybe—' and the tears trickled down her cheeks, 'he won't—be so well.'

"Mr. Ingraham, who is an Episcopal minister of the warmest-hearted kind, thought that difficulty might be overcome; and if she would put on her bonnet they would go to a store where articles were cheap. Accordingly, they arrived in front of the large three-story building which government has assigned to the Commission, and the old lady was soon running her eyes over the long rows of boxes, bales and barrels that stretched for a hundred feet down the room, but was most fascinated by the bottles and cans on the shelves. He ordered a supply of sugar, tea, soft crackers and canned fruit; then chicken and oysters; then jelly and wine, brandy, milk, and under-clothing—until the basket was full. As the earlier articles nestled under its lids, her face was glowing with satisfaction; but as the later lots arrived, she would draw him aside to whisper that it was too much; 'really she hadn't enough money;' and when the more expensive items came from the shelves, the shadow of earnestness which gloomed her countenance grew into one of perplexity, her soul vibrating between motherly yearning for the lad on his bed, and the scant purse in her pocket, until, slowly and with great reluctance, she began to return the costliest.

"Hadn't you better ask the price?" said her guide. "How much is it?" "Nothing," replied the storekeeper. "Sir?" queried she, in the utmost amazement, "nothing for all this?"

"My good woman," asked the guide, "have you a Soldiers' Aid Society in your neighborhood?" Yes, they had; she belonged to it herself. "Well, what do you suppose becomes of the garments you make, and the fruits you put up?" She hadn't thought; she supposed they went to the army; but was evidently bothered to know what connection there could be between their aid society and that basket. "These garments that you see came from your society, or other societies just like yours; so did these boxes and barrels; that milk came from New York; those fruits from Boston; that wine was likely bought with gold from California; and it is all for sick soldiers, your son as much as for any one else. This is the U. S. Sanitary Commission store-house; you must come here whenever you wish, and call for everything you want; and you must stay with your son until

he is able to go home; never mind the money's giving out; you shall have more, which, when you get back, you can refund for the use of other mothers and other sons; when you are ready to go I will put him in a berth where he can lie down, and you shall save his life yet!"

"She did—God bless her innocent, motherly heart—when nothing but motherly care could have achieved it; and, when last seen, on a dismal, drizzly morning, was, with her face beaming out the radiance of hope, making a cup of tea on the stove of a caboose car for the convalescent, who was snugly tucked away in the caboose berth, waiting the final whistle of the locomotive that would speed them both homeward."

There are, nevertheless, persons in the community who are either wilfully blind to or strangely ignorant of the immense benefits flowing out from this magnificent charity. One of our professional contemporaries has even had the bad taste—to use the mildest term—to speak of it as if it were little better than a political engine, and one, too, that ought to be closely restrained in its power. To such perverseness we have no patience to reply. As an illustration of the surprising ignorance which may even yet exist in some quarters about its operations, we quote the following from the *Bulletin* :—

"AN OFFICER'S OPINION, AND WHAT BECAME OF IT.—'The Sanitary Commission is a humbug. It has done no good, and never will.' This was the remark of an officer lately who had been in this hospital for some time sick; and perhaps I can serve the cause of humanity and the country in no better way than by repeating the conversation which then took place, and give the results:—' You think so, do you? What was the matter with you when you came here?' 'Diarrhoea and scurvy.' 'What was the first thing done for you when you came here?' 'I had a warm bath and clean clothes; but what has that to do with the Sanitary Commission?' 'Never mind, we will see. Are you better than when you came in?' 'Yes, nearly well.' 'What has cured you?' 'The vegetables, I believe.' 'Do you know where the vegetables came from?' 'No.' 'You were in the Commissary-room to-day, and admired the stock of vegetables, pickles, cabbages, cans of fruit, bottles of wine, and cordials, did you not?' 'Yes, but why?' 'No matter why. I want you to look at the shirt and drawers you have on, then go through the hospital and see one hundred and twenty-two men with clean shirts, drawers, sheets and pillow-cases; then go into the linen-room and I will show you enough more to change every man and every bed, and the whole of it came from the Sanitary Commission. All the pickled cabbage you and the rest have eaten has come from them, and they are ready to furnish as much more if I need it; and yet you say, without knowing what you talk about, that the Sanitary Commission is a humbug! If it had not been for this Commission, you and the rest of those in this hospital from the Army of the Potomac, who have been suffering from scurvy, would be as badly off as you were when you came in. You have abused an association which has put comfortable clothes upon you, has provided the vegetables you needed to cure you, and has done the same for thousands besides you.' 'Doctor, I never knew these things before. I have heard that all they did was for the benefit of the surgeons about the hospitals; but, to tell you the truth, I never inquired. There is an Aid Society in our place, and I have discouraged my sisters from having anything to do with it; but no such word shall come from me again.'

"He was cured of his folly, humbled and shamed, for it was at the dinner-table that the conversation took place, and I was glad that others were present. This is not a solitary instance. I have had to contend with just such *perverse ignorance* for the past two years; but this was so striking a case that I thought it might do good to furnish it for publication in the *Reporter*. The Commission has aided and blessed me in my work ever since November, 1861; and I say again, as I have said before, 'that no instrumentality within my knowledge has done so much real good for the service as the United States Sanitary Commission.'

BENJ. WOODWARD,

Surgeon 22d Ill. Vols., in charge.

U. S. Gen. Hospital, Tullahoma, Tenn., Nov. 17th, 1863.

LOOK ON THIS PICTURE.—(Diet of Federal prisoners at Richmond, as reported by General Neal Dow.)

"We have only corn bread (*unsifted*), a little rice, and a few poor sweet potatoes and water for our rations. The bread is about half a pound; the rice half a gill. I had to-day eight potatoes; only two were good for anything—medium size—the others not larger than one's finger!"

And on this.—(Diet of rebel prisoners at Point Lookout, Md.)

FULL DIET.	HALF DIET.	LOW DIET.
Dinner.	Dinner.	Dinner.
Beef or pork, 4 oz.	Meat, 2 oz.	No meat.
Potatoes, 4 oz.	Potatoes, 3 oz.	Potatoes, 2 oz.
Hard-tack, 3 oz.	Hard-tack, 2 oz.	Hard-tack, 1 oz.
Breakfast and Tea.	Breakfast and Tea.	Breakfast and Tea.
Coffee or tea, 1 pt.	Coffee or tea, 1 pt.	Coffee or tea, 1 pt.
Rice, 2 gills.	Rice, 1 gill.	Rice, 1 gill.
Molasses, 1 oz.	Molasses, $\frac{1}{2}$ oz.	Molasses, $\frac{1}{2}$ oz.
Hard-tack, 3 oz.	Hard-tack, 2 oz.	Hard-tack, 1 oz.

Soup and soft bread are also given them at least once a week.

We commend these pictures to our professional brethren on the other side of the water who are so much shocked at "Federal Foul Blows."

BILL FOR AN AMBULANCE SYSTEM.—We are pleased to see that Senator Wilson has introduced a bill in the United States Senate for a complete system of ambulances for the whole army. So far as its provisions have appeared in the newspapers they are identical with those of General Meade's order, an abstract of which we printed a short time since. As the Senator from Massachusetts has been usually regarded as the most strenuous opponent of such an organization, we suppose the withdrawal of his opposition is tantamount to the success of the measure. This certainly is a matter for great public congratulation. Who shall deny hereafter the force of public opinion?

THE operation for ligature of the subclavian artery, performed in November by Dr. Armsby, of Albany, has been successful. The ligation came away on the twenty-ninth day. It is now (Dec. 28th) forty days since the operation, and the patient is able to attend to business.

DUTCH TRANSLATION OF PROFESSOR GROSS'S SURGERY.—We have had an opportunity of examining the first volume of Dr. J. D. Sachse's

translation of Prof. Gross's *Surgery*, published at Nieuwediep the present year. This volume constitutes one-fourth of the whole work, so that the Dutch translation will form four volumes. The part we have seen is very elegantly gotten up, and the publisher writes that it has been received with great favor by the profession of Holland. Prof. Gross has reason to be gratified at the superior style in which his work is offered to his brethren abroad, and also with the flattering reception it has met with.—*Med. News and Library.*

A NEW HOSPITAL IN NEW YORK.—The late James H. Roosevelt has devised his entire estate, nearly half a million of dollars, "for the establishment, in the city of New York, of a hospital for the reception and relief of sick and diseased persons, and for its permanent endowment."—*Med. Reporter.*

THE ACTION OF OXYGEN ON WINE.—At the last meeting of the Academy of Sciences, M. Berthelot showed that ten cubic centimetres of oxygen are sufficient to destroy the bouquet of a litre of wine in a few minutes. Hence the importance of corking bottles carefully. Yet a small quantity of oxygen in a diluted state, as in atmospheric air, does not seem to spoil the bouquet, owing to the presence of carbonic acid in wine. The cause of the loss of bouquet in wine after long keeping appears to be the gradual absorption of oxygen, which affects it as would the addition of a mineral water, such as that of Vichy.—*London Lancet.*

VITAL STATISTICS OF BOSTON.
FOR THE WEEK ENDING SATURDAY, DECEMBER 26th, 1863.
DEATHS.

		<i>Males.</i>	<i>Females.</i>	<i>Total.</i>
Deaths during the week	- - -	52	59	111
Ave. mortality of corresponding weeks for ten years, 1853—1863,	- - -	41.8	36.5	78.3
Average corrected to increased population	- - -	00	00	85.69
Death of persons above 90	- - -	0	0	0

Mortality from Prevailing Diseases.							
Phthisis.	Croup.	Scar. Fev.	Pneumon.	Variola.	Dysentery.	Typ. Fever.	Chol. Infan.
24	6	9	10	0	1	2	0

MARRIED.—In Christ Church, Stratford, Conn., Dr. William Henry Carmalt, of New York city, to Miss Laura Woolsey Johnson, of Stratford.

DIED.—At Kalamazoo, Mich., Charles P. Marsh, M.D., 35.—In Johnstown, Fulton Co., N. Y., 9th inst., Samuel Maxwell, M.D., aged 80.

DEATHS IN BOSTON for the week ending Saturday noon, Dec. 26th, 111. Males, 52—Females, 59.—Accident, 3—aneurism (of the aorta), 1—congestion of the brain, 1—disease of the brain, 1—bronchitis, 4—burns, 3—cancer (of the uterus), 2—consumption, 24—croup, 6—diarrhoea, 1—diphtheria, 2—dropsy, 4—dropsy of the brain, 3—dysentery, 1—scarlet fever, 9—typhoid fever, 2—disease of the heart, 1—hernia, 1—infantile disease, 4—intemperance, 1—jaundice, 1—disease of the kidneys, 1—disease of the liver, 3—congestion of the lungs, 1—inflammation of the lungs, 10—marasmus, 3—old age, 4—paralysis, 1—premature birth, 2—puerperal disease, 1—scalded, 1—softening of stomach, 1—tumor, 1—ulcers (in stomach), 1—unknown, 5—whooping cough, 1.

Under 5 years of age, 41—between 5 and 20 years, 14—between 20 and 40 years, 22—between 40 and 60 years, 24—above 60 years, 10. Born in the United States, 66—Ireland, 39—other places, 6.